

Appl. No. 09/548,946
Amdt. dated September 7, 2004
Reply to Office Action of June 8, 2004

PATENT

Amendments to the Specification:

Please replace the paragraph beginning at page 3, line 27 with the following amended paragraph:

--As can be seen in Figure 4 3, bumped die 15 includes a plurality of solder bumps 20, preferably arranged in rows over a source area 21 of the die on a top surface of the die. A solder bump 22 is also placed on a gate area 23 20g of the die, which is also on the top surface of the die.--

Please replace the paragraph beginning at page 3, line 32 with the following amended paragraph:

--Die ~~12~~ 15 is preferably a one-piece item that is often referred to in the art as a "bumped die."
As can be seen in Figure 2, a bumped die includes a die 12, an "under bump material" that serves as an intermediate layer 26 between the top surface of the die and solder bump 22, and the solder bump 22 bumps themselves. Preferably, the under bump material is one of TiW, Cu, Au or an equivalent. In the example illustrated in Figure 2, the under bump material is broken into three layers - Cu plating 26a, sputtered Cu 26b and sputtered Ti 26d.--

Please replace the paragraph beginning at page 4, line 9 with the following amended paragraph:

--The Referring to Figures 3 and 4, the bumped die is preferably flip chip attached on to leadframe 11, i.e, it is "flipped" from a sawn tape onto the leadframe. As shown, the leadframe 11 includes a number of elongated apertures 96 that are disposed under the bumped die 15 when the bumped die 15 is mounted on the leadframe 11. As shown, when the bumped die 15 is mounted on the leadframe, the elongated apertures 96 are between the solder bumps of the bumped die 15. The bumped die 15 is placed on the leadframe 11 such that gate solder bump 22 contacts the gate connection region 23 122 on the leadframe 11 while the source solder bumps 20 contact the source connections 24 121 on the leadframe 11.--

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Please replace the paragraph beginning at page 4, line 14 with the following amended paragraph:

-- Solder paste 30 is dispensed on a backside of the bumped die and into elongated v-groove 18 in lead rail 13. Clip 16, preferably consisting of copper, is supplied, (preferably in reel form) and pick-and-placed onto the die backside such that edge 17 of the copper clip is placed within the elongated v-groove. Thus, the clip provides contact with the chip's drain regions (which are located on the chip's backside) and couples these drain regions to leads 14 of the lead rail 13--